

**SOLID ELECTROLYTE**

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POLYTEC DESIGN:KK

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**[57] Abstract:**

PROBLEM TO BE SOLVED: To obtain a solid electrolyte which has a high ionic conductivity in the temp. range from room to low temps. and is excellent in formability into a thin film, flexibility, and mechanical properties by selecting a solid electrolyte comprising a continuous phase consisting of a first polymer and an org. electrolyte compatible therewith and a support phase consisting of a second noncross-linked polymer incompatible with the org. electrolyte. SOLUTION: This solid electrolyte comprises a continuous phase consisting of a first polymer made up of at least one member selected among polymers represented by formulas I (wherein R<sup>1</sup> is H or methyl), II (wherein R<sup>2</sup> is H or methyl; and (n) is 1-5), and III (wherein R<sup>3</sup> is H or methyl; (m) is 1-3; l is 1-5; and X is O or S) and an org. electrolyte compatible therewith and a support layer consisting of a second noncross-linked polymer incompatible with the org. electrolyte. Pref. the amt. of the first polymer is 40-95wt.% of the sum of the first and second polymers, and that of the second polymer is 60-5wt.%. The amt. of the org. electrolyte is pref. 1-50 times that of the first polymer.

[51] **Int'l Class:** C08L03320 C08L03304 H01B00106 H01M00618  
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